M. Bradner

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FOREST SURVEY RELEASE NO. 6 A JULY 1937 PROGRESS REPORT

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NRM
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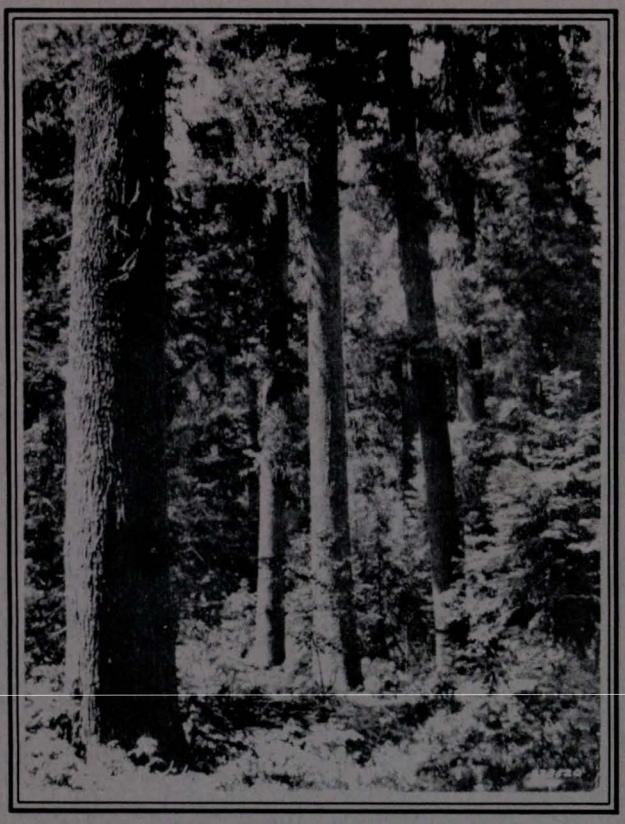
no. 6

FOREST STATISTICS
BOUNDARY COUNTY, IDAHO

FROM THE INVENTORY PHASE OF THE FOREST SURVEY



U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

NORTHERN ROCKY MOUNTAIN
FOREST AND RANGE EXPERIMENT STATION

STEPHEN N. WYCKOFF DIRECTOR
MISSOULA MONTANA

BY FOREST SURVEY STAFF M. BRADNER REGIONAL DIRECTOR

FOREST STATISTICS FOR BOUNDARY COUNTY, IDAHO

From the Inventory Phase of the Forest Survey

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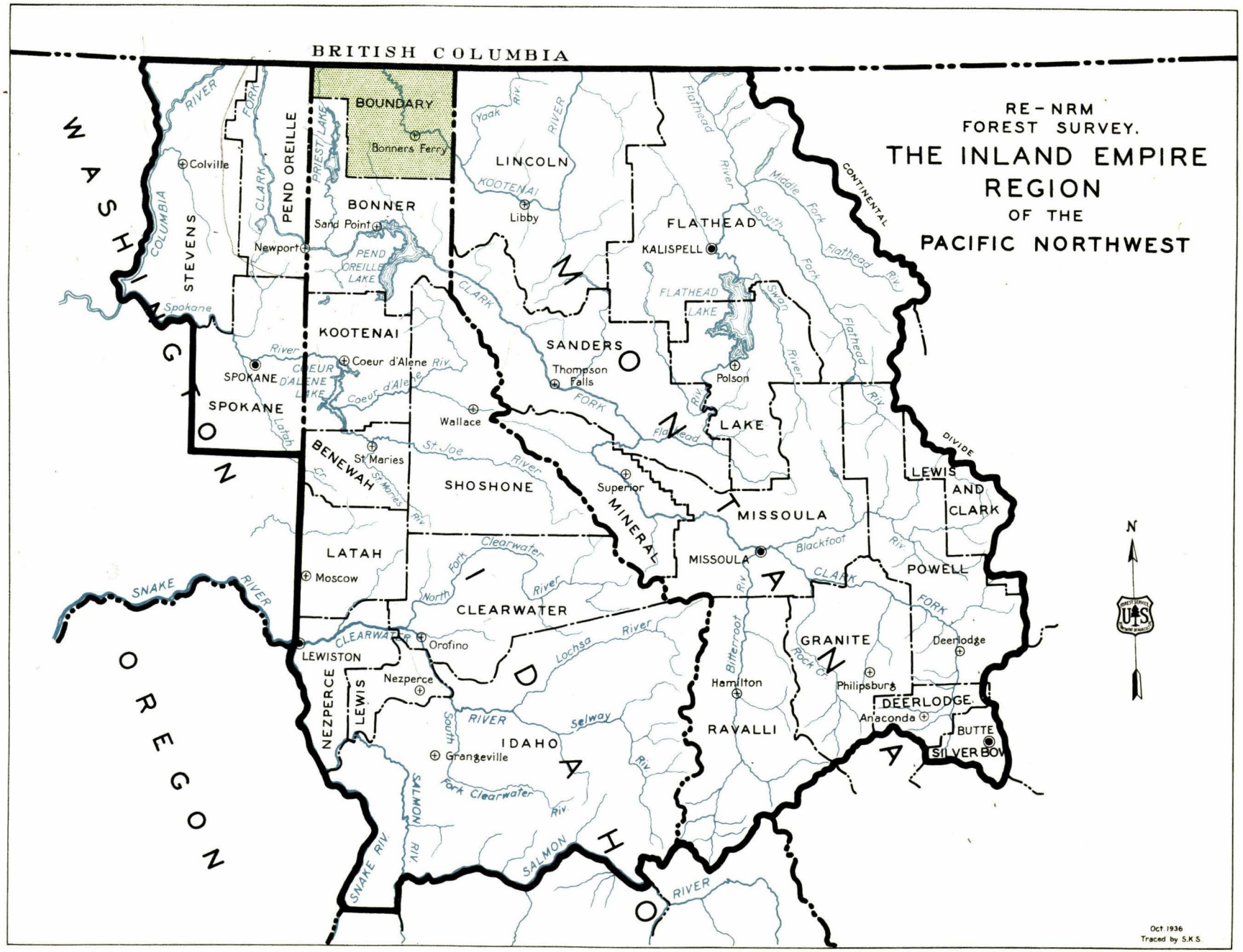
BRITISH COLUMBIA
WASHINGTON
IDAHO
MONTANA
OREGON
RE-NRM
FOREST SURVEY.
THE INLAND EMPIRE
REGION
OF THE
PACIFIC NORTHWEST
BOUNDARY
Bonners Ferry
BONNER
Sand Point
PEND OREILLE
Newport
STEVENS
Colville
COLUMBIA RIVER
CLARK FORK
PRIEST LAKE
PEND OREILLE LAKE
KOOTENAI
Coeur d'Alene
COEUR D'ALENE LAKE
SPOKANE
Spokane River
Latah Cr.
BENEWAH
St Maries
St. Joe River
St. Maries Riv.
LATAH
Moscow
SNAKE RIVER
LEWISTON
NEZPERCE
Nezperce
LEWIS
CLEARWATER
Orofino
North Fork Clearwater River
Clearwater River
LINCOLN
Libby
Yaak River
KOOTENAI RIVER
SANDERS
Thompson Falls
CLARK FORK
Wallace
SHOSHONE
Superior
MINERAL
FLATHEAD
KALISPELL
Flathead River
Middle Fork Flathead River
South Fork Flathead River
CONTINENTAL DIVIDE
FLATHEAD LAKE
Swan River
Polson
LAKE
LEWIS AND CLARK
MISSOULA
Blackfoot River
POWELL
GRANITE
Deerlodge
Philipsburg
Rock Cr.
Hamilton
Bitterroot River
RAVALLI
DEERLODGE
Anaconda
BUTTE
SILVER BOW
Lochsa River
Selway River
South Fork Clearwater River
SALMON RIVER
SNAKE RIV.
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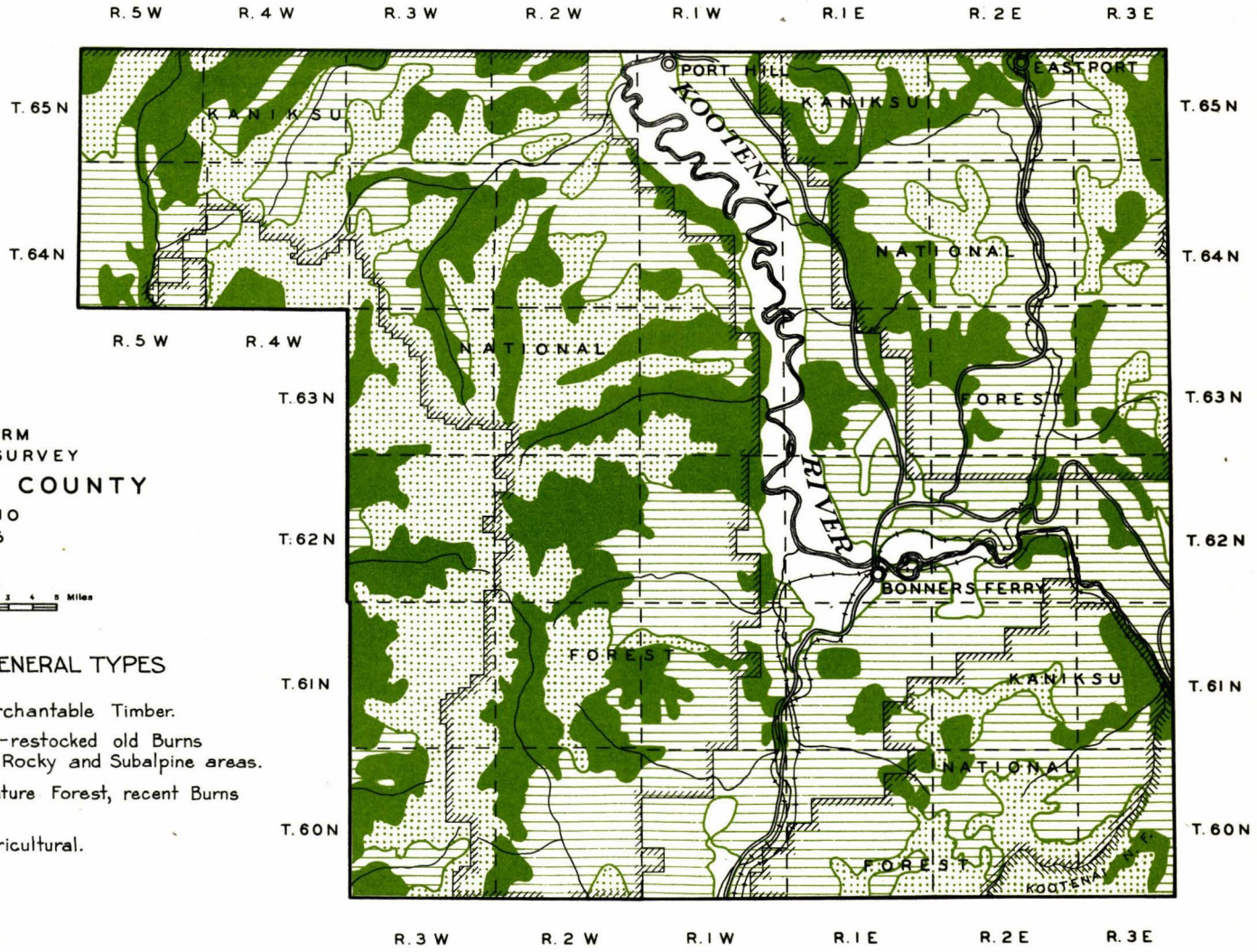
Oct 1936
Traced by S.K.S.



RE-NRM
FOREST SURVEY

BOUNDARY COUNTY

IDAHO
1935

Scale
1 ½ 0 1 2 3 4 5 Miles

SHOWING GENERAL TYPES

- Principally Merchantable Timber.
- Principally Non-restocked old Burns and Cutovers, Rocky and Subalpine areas.
- Principally Immature Forest, recent Burns and Cutovers.
- Principally Agricultural.

Traced by E. V. W.
Feb. 1937

RE-NRM
Forest Survey

FOREST STATISTICS FOR BOUNDARY COUNTY, IDAHO

Foreword

A short but colorful tale is woven through the lumber history of Idaho's ten northern counties. In the less than 80 years since the first lumber production in the Panhandle, industrial expansion has changed a scene of boundless plenty to one of imminent timber shortage.

It is recorded that the field party of the soldier-explorer, Captain Mullan, whipsawed lumber along the St. Joe River in 1859. In a historical sense this hand sawing operation may be considered the beginning of the lumber industry in this territory; however, many years elapsed before there was any real development, the millions of acres of timberland in north Idaho remaining virtually untouched as late as 1880. As the available white pine stands in the Lake States became fewer, the lumbermen there turned their eyes to this new field and the growth of the Idaho white pine industry was begun. With the first eastern millmen moving into Idaho during the nineties, the lumber industry mushroomed to huge proportions during the early years of the present century. New mills were constructed and new areas tapped as more capital was attracted. The high tide of this expansion was reached during the 1920's, and from then until the present a succession of large mills have ceased operation and lumber production has declined from its former heights. During these few years the most desirable and accessible timber has been cut and in the face of present abandoned mills and dying communities a local timber

shortage appears as a possibility in the near future. This situation has focused attention upon the need for intelligent planning in the utilization of the forest resources and the management of the remaining merchantable timber area, of which there still is a considerable acreage, to maintain the industry during the period while the younger stands are growing to merchantable size.

As the Nation has awakened to forest consciousness the importance of the less evident values of the forest cover has been realized, and the function of watershed protection and the possibilities for recreational development are being given rightful consideration in forest planning. The forests have ceased to be considered as just an exploitable resource but rather as a replenishable storehouse, the proper management of which is vital to local and national welfare.

That intelligent planning might be possible, the nationwide Forest Survey has been established to collect and present the essential data concerning the forest land. This is the fourth in a series of reports representing the results of one aspect of the regional project, a comprehensive inventory of the forest cover in each of the counties of the Northern Rocky Mountain Region.[1/]

General

Lying along the Canadian boundary farthest north in the panhandle of Idaho, Boundary County is essentially a forest county. Ninety-three percent of its 813 thousand acres total area (fig. 1)

1/ The Northern Rocky Mountain Region includes the three northeastern counties in Washington, Idaho north of the Salmon River, and Montana.

GENERAL CLASSIFICATION OF LAND
BOUNDARY COUNTY, IDAHO

Figure 1.

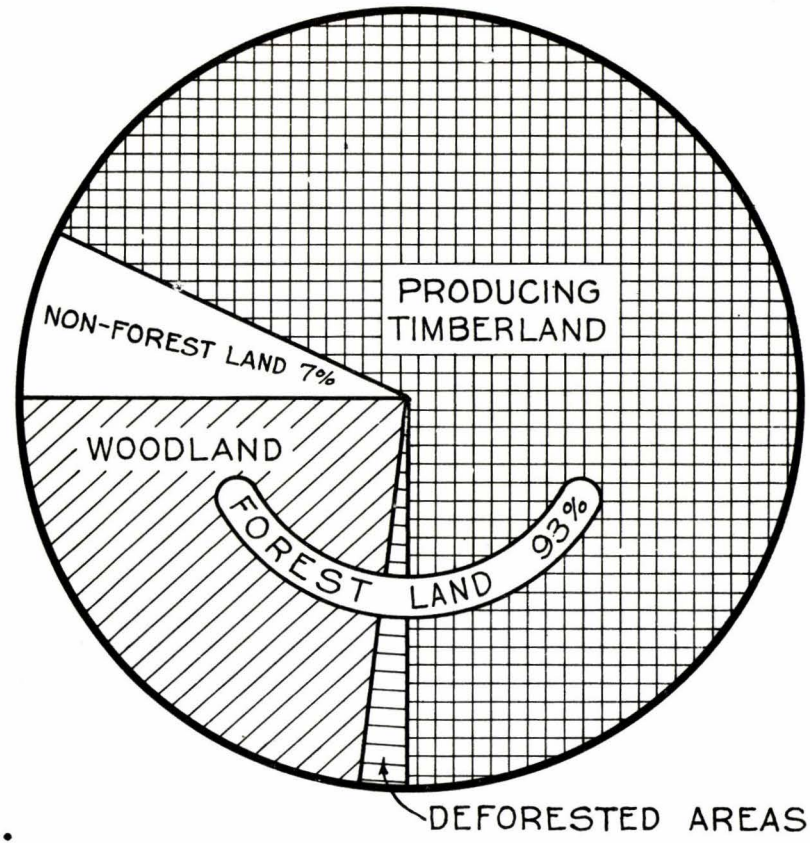


Table 1.

	Area in Acres
NON-FOREST LANDS	
Townsites	841
Cultivated and Stump Pasture	53,029
Grassland	2,800
Brush	1,651
Barren and Other Wasteland	440
Total	58,761
FOREST LAND	
Timberland	
Producing	549,523
Deforested	18,411
Total	567,934
Woodland	
Subalpine	174,461
Rocky Noncommercial	11,629
Total	186,090
Total Forest Land	754,024
GROSS LAND AREA	812,785

is forest land, varying from low and rolling hills to steep and rugged mountains. The remaining seven percent of the area is mainly agricultural land, the bulk of which lies in the fertile valley of the Kootenai River. At the present time agriculture is the principal industry in the county.

Bonners Ferry, the county seat and trade center, is a thriving community of one and one-half thousand inhabitants and the largest town in the area.

History of Forest Exploitation

Although the original settlement of the area now known as Boundary County dates back to 1863 and the establishment of a ferry over the Kootenai River, there was no material growth of population for a number of years. The construction of the Great Northern Railway in 1892 was the prime factor in promoting extensive settlement and development of the county. According to early records the first sawmill[2/] was erected by William Eaton at Bonners Ferry in 1891. Further historical information reveals that in the period around 1903 the bulk of the lumber supply was furnished by the International Lumber Company. Of any other mills that may have operated during the few early years there is no mention.

For the most part the lumber history of Boundary County is synonymous with that of the Bonners Ferry Lumber Company, which has so far been the only concern with a mill of any size in this area. Established in 1905 by the Stein Lumber Company of Glenwood, Wisconsin, this mill directly and indirectly contributed financial

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2/ "History of North Idaho." Western Historical Publishing Company - 1903.

support to a large population, giving the equivalent of full time employment to over 500 men in woods and mill during the peak of its operations.

The Bonners Ferry Lumber Company had an average annual production of 35 million board feet with a maximum of nearly 50 million feet.

Unlike the majority of the north Idaho mills, this company was not a white pine concern; instead its production ran predominantly to ponderosa pine, larch and Douglas fir. In addition to the local supply a large proportion of the logs milled by the Bonners Ferry Lumber Company came from Lincoln County, Montana, and British Columbia, Canada. The company obtained logs from all three sources in the early years but mainly from Lincoln and Boundary Counties in the last ten years of operation. In 1926 this mill ceased operations, subsequently being dismantled. The result was a severe revenue loss to Bonners Ferry and the tributary region.

In addition to this large establishment there were in 1925 two other sawmills in Boundary County producing over one million board feet annually. In 1936 three mills, all new since 1925, exceeded this total. In the latter year, seven other smaller mills were also in operation.

In the period 1925-1929 it is estimated that about 41 percent of the log production was milled within the county, whereas in the years 1930-1936 approximately 89 percent of the log output was locally milled. Much of the timber produced in

Boundary County has been exported to mills elsewhere for manufacture; going principally to concerns in the vicinity of Sandpoint, Idaho; lesser amounts have been marketed in Spokane, Washington; Libby, Montana; and Coeur d'Alene, Idaho. The A. C. White Lumber Company, located west of Sandpoint in Bonner County, received, from about 1918 until the mill was shut down in 1929, the majority of its logs from Boundary County. This company and the Humbird Lumber Company of Bonner County, which ceased operations in 1931, were the principal outside concerns milling Boundary County logs.

With the closing of the several mills previously mentioned, the county log and lumber production figures alike have decreased materially. In 1925, which was the peak year for Boundary County, log production was 102 million board feet lumber tally. A low for a considerable period was established in 1933 and 1934 with an annual output of less than 8 million feet. The 1936 figure was slightly higher, 15.5 million feet, or 15 percent of the 1925 total. In 1925 the total yearly lumber cut for Boundary County mills amounted to 53 million board feet; 3 million board feet in 1927; and almost 11 million board feet in 1936, the latter figure being 21 percent of the 1925 high.

When measured in terms of the dependent population the effect of these fluctuations in the lumber industry is more easily realized. Again turning to the year 1925 it is estimated that the logging and milling phases of the lumber industry furnished the equivalent of year-round employment for over 800 persons. Since some operations run but a few months of the year,

actually a greater number were employed for shorter periods. Calculating these wage and salary earners with their dependents, and in addition, the butcher, the baker, the doctor, etc. and their families, all of whom exist by virtue of the money spent by the former group in return for service, the lumber industry can be said to have supported directly and indirectly more than 2900 people in 1925. In 1936 the industry furnished the equivalent of year-long employment to 140 persons and direct and indirect support to about 500.

Agricultural Development

Boundary County is still in the pioneering stage. Despite the decline in the lumber industry, the population has been maintained and has actually increased in recent years. Once secondary to lumbering, agriculture has now become the principal occupation with a number of former woods and mill workers turning to the soil. During recent years these have been augmented by a considerable influx of settlers from the drouth-stricken prairie states. Between 1930 and 1935, the number of farms in Boundary County increased 50 percent.[3/] As the result of this farm activity an additional acreage of forest land will be cleared for cultivation in the coming years. The Resettlement Administration has estimated that 20 thousand acres in the county, that are now forested, are suitable for this use.

The Forest Survey data shows an area of 51 thousand acres as land cleared for agriculture, and 2 thousand acres as stump

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3/ "A Reconnaissance Land Classification of Boundary County, Idaho." The Resettlement Administration, Region 2.

pasture in the process of being cleared. The bulk of the cultivated land lies in the fertile lowlands of the Kootenai Valley whereas the suitable farm area yet to be developed lies principally on the higher benchland.4/

Many of the smaller farms now do and will continue to contribute only a portion of the income for their occupants. Private forest industry, and forest protection and development by public agencies offer the principal source of additional revenue for such individuals. To many living on low margin farms and likewise to many others without steady income, the revenue from this part-time employment has been of distinct value.

The Kaniksu National Forest, the principal public ownership in Bonner, Boundary and Pend Oreille Counties, has furnished work to a considerable number of seasonal employees during past years in addition to the year-around personnel. On June 30, 1937, the regular payroll included 360 persons. This force has been augmented in recent years by an additional number (460 on June 30, 1937) paid from emergency relief monies. While no actual figures are available on a county basis, a proportional part of the employment has been shared by Boundary County.

Present Stands

The most notable facts brought out by the forest statistics for Boundary County are the large area of sawlog stands and the large area of subalpine and rocky land.

4/ See footnote 3/

In the county there is a total area of 754,024 acres of forest land. Twenty-three percent of this, 174,461 acres, (table 1) is above the altitude range of merchantability and contains sub-alpine stands valueless from the sawtimber standpoint. One and one-half percent of the forest area (11,629 acres) is steep and rocky, also being unfit for timber production. Comparable with these two types there are 13,755 acres of zone three timberland with no commercial value. This latter area, although producing timber stands, is so classified because of its economic inaccessibility. The worth of the 199,845 acres in these three groups is represented in the form of recreational possibilities and the benefits derived from watershed protection. This second value, if termed in dollars and cents, would reach enormous figures.

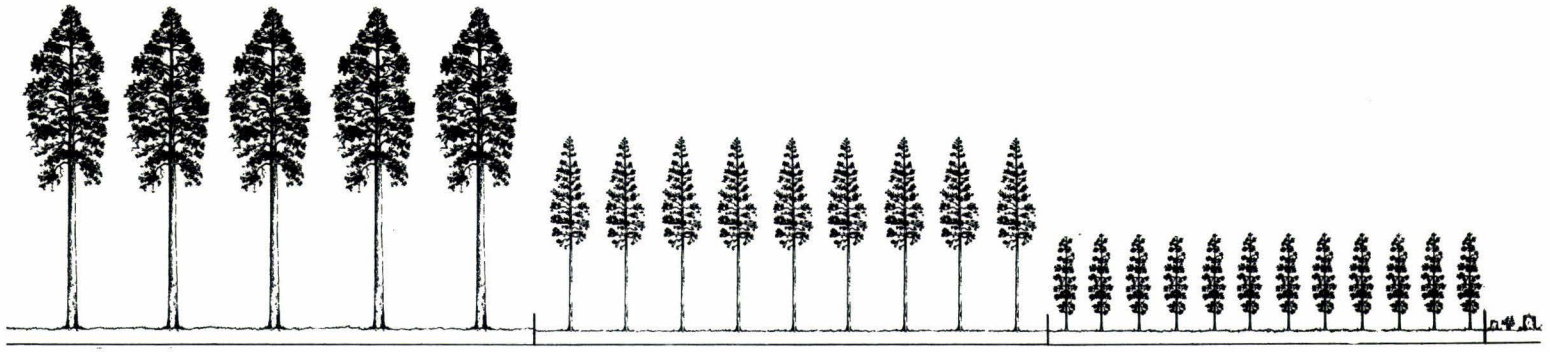
Seventy-five and one-half percent of the forest area has been classified as timberland: that is, land producing or capable of producing stands of commercial species and quality. The 567,934 acres in this class include the previously mentioned 13,755 acres of inaccessible, zone three, timberland.

Seemingly to minimize the possibility of a local timber shortage there are 196,483 acres containing sawtimber stands. However, only 40 percent and 16.5 percent respectively of this area are in the commercially valuable white pine and ponderosa pine types. About 18 percent of the sawtimber area is Engelmann spruce type, 16 percent larch-Douglas fir and 9.5 percent other types (table 2).

The Survey data reveals a total of 323,791 acres with immature stands ranging from seedlings to young poles bordering on

Fig. 2

CHARACTER OF TIMBERLAND COVER IN ZONES ONE AND TWO – BOUNDARY COUNTY, IDAHO
554,179 ACRES



SAWLOG STANDS *
193,464 Acres

POLE STANDS **
186,725 Acres.

SEEDLING AND SAPLING STANDS***
159,564 Acres.

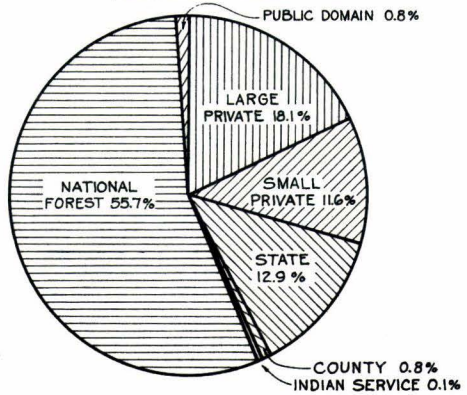
DEFORESTED
14,426 Acres.

* Including Merchantable Cedar and Cedar-White Fir Pole Stands.
** Including all Immature Cottonwood Stands.
*** Including Recent Burns and Cutovers.

Fig. 3

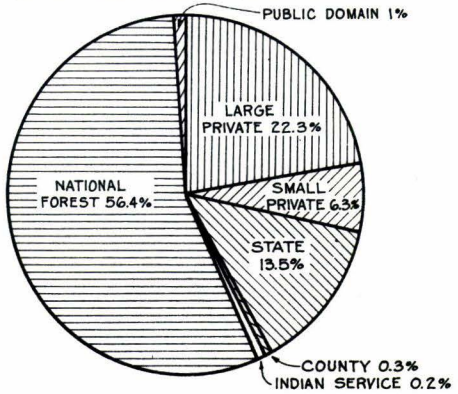
OWNERSHIP OF FOREST LAND AND TIMBER – BOUNDARY COUNTY, IDAHO

ALL FOREST LAND



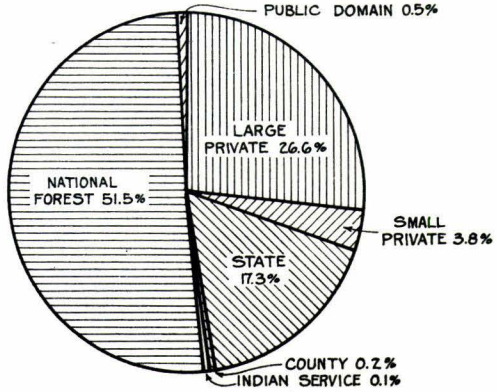
754,024 Acres.

SAWLOG STANDS-ZONES ONE AND TWO



193,464 Acres.

VOLUME IN SAWLOG STANDS-ZONES ONE AND TWO



2,461,557,000 Board Feet.

FOR DEFINITION OF ZONES-SEE GLOSSARY

the merchantable. A considerable area is occupied by these older stands, which will become merchantable in the next 20 to 40 years.

Only 3 percent of the timberland area in Boundary County, or 18,411 acres, is deforested. Another 5 percent, 29,249 acres with a better chance of restocking, is in a state of transition after recent fire and logging.

The areas of zone one and two timberland in the various classes are shown in figure 2. The acreage in these two zones represents the maximum that may be considered suitable for commercial management.

Comparative Value of Types

Although they represent a much smaller portion of the total stand inventory, approximately three-fourths of the north Idaho lumber production in recent years has been white pine and ponderosa pine. Lack of public demand has, for the most part, limited the production of other species to the volume that may be profitably cut in white and ponderosa pine operations. For this reason logging thus far has been concentrated in these two major types. Even in these areas, however, the values for the minor species have often not been sufficient to warrant their having been logged.

That the value of some of the minor species, at least, will improve during the coming years is conceded, but until that time, areas lacking commercial quantities of white pine and ponderosa pine are not likely to be logged to any extent. In Boundary County, 37 percent of the total producing timberland in the

Fig. 4

ACTUAL AND DESIRABLE DISTRIBUTION OF AGE CLASSES IN TIMBERLANDS ZONES ONE AND TWO – BOUNDARY COUNTY, IDAHO

547,717 ACRES*

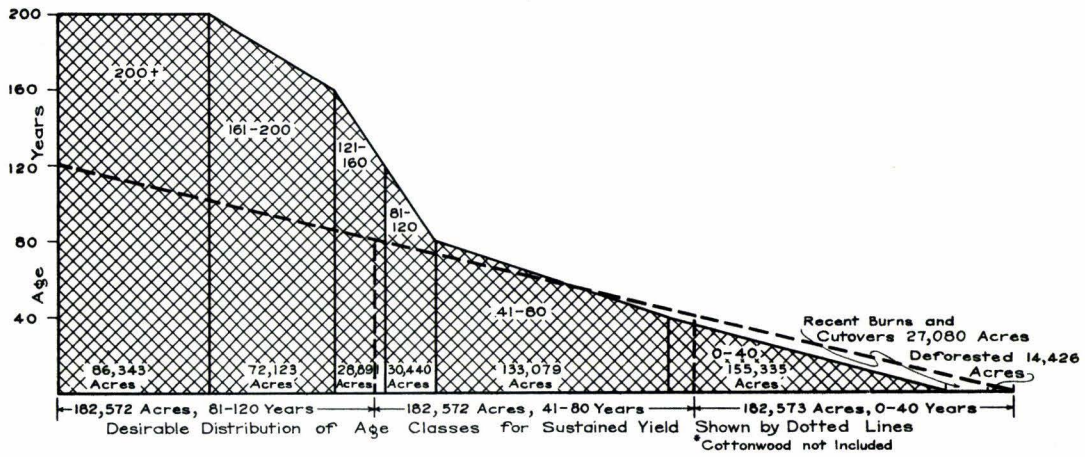


Fig. 5

VOLUME IN TIMBER STANDS BY SPECIES BOUNDARY COUNTY, IDAHO

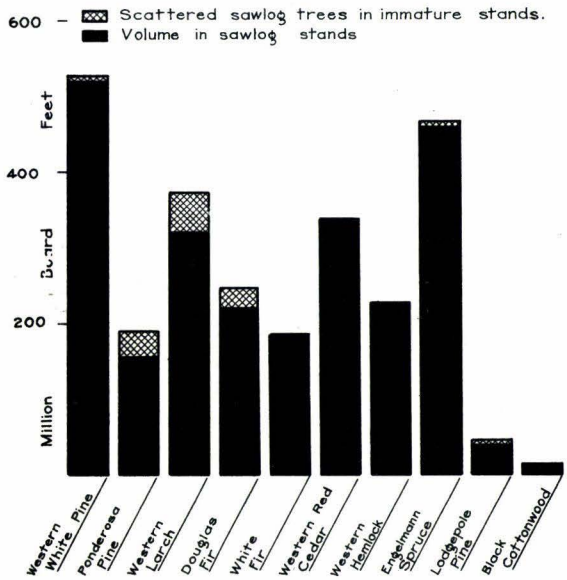
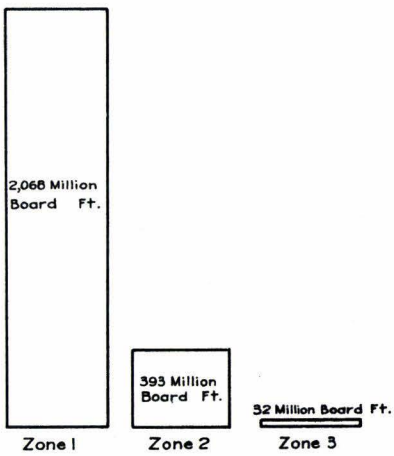


Fig. 6

VOLUME IN SAWLOG STANDS BY ZONES BOUNDARY COUNTY, IDAHO



FOR DEFINITION OF ZONES – SEE GLOSSARY

commercial zones (one and two) is white pine type and 15 percent ponderosa pine type. (table 2)

Timber Volumes

With an average volume per acre of almost 13 thousand board feet, the 196 thousand acres of sawlog stands in Boundary County contain a total volume estimated at 2,493,715,000 board feet. Approximately 83 percent of this volume (tables 4 and 5) is in zone one or immediately accessible sawlog areas. Sixteen percent is in zone two sawlog stands which may be loggable with an increased profit margin; and the remaining 1 percent is in the inaccessible and commercially valueless zone three stands.

As is shown graphically in figure 5, the total merchantable volume is rather evenly divided among the species, white pine predominating with 21 percent and Engelmann spruce ranking next with 19 percent. Ponderosa pine, which has been the principal species cut in past logging in Boundary County, represents only 6 percent of the total volume in sawlog stands.

An interesting comparison of the volume densities in the sawlog stands is obtained in the following average volumes per acre.

Western white pine type	16,000	bd.	ft.	per	acre	all	species
Ponderosa pine type	6,800	"	"	"	"	"	"
Douglas fir and larch-Douglas fir types	6,700	"	"	"	"	"	"
Engelmann spruce type	11,700	"	"	"	"	"	"
Other types	23,000	"	"	"	"	"	"

To obtain as nearly a complete picture as possible, the Forest Survey data includes, in addition to the volume in sawlog stands, the volume contained in scattered sawlog size trees in young stands down to as low as 500 board feet per acre. While

this volume has no present sawlog value, it does represent the source of much of the fuelwood used in the region. A total of 143 million board feet, shown in table 3, is contained in these scattered trees in Boundary County. This volume supplies the bulk of the 17 thousand cords of fuelwood cut annually in the county, a total cut which has exceeded the sawtimber production in several recent years.

The total net board foot volume figures given in this report are, for several well defined reasons, much higher than any previous estimates. They include, as already mentioned, the volumes in scattered trees on cutover and burned areas and the volumes in inaccessible and unloggable stands. Though the standards of tree merchantability set up for the Forest Survey compare closely with the actual utilization for such species as western white pine, ponderosa pine and lodgepole pine, they include trees of a smaller diameter than those usually cut in the case of the less valuable sawlog species. As an example: the Forest Survey includes all sound hemlock trees larger than 13 inches in diameter breast high that have two logs to an eight-inch top and are physically suitable for lumber, while private cruises seldom include hemlock trees of such small diameter and height.

The present economically accessible (zone one) sawlog volume includes 155 million board feet on 22 thousand acres of partially cut sawlog stands from which the more valuable species have been removed.

Forest Ownership

The outstanding feature in the forest ownership picture for Boundary County is the preponderance of publicly controlled forest land. Seventy and three-tenths percent of the total forest area and 71.4 percent of the zone one and two sawlog stand area are publicly owned. A simple graphical comparison of the ownership ratios for all forest land, merchantable stands, and timber volume is presented in figure 3 of this report. As can be seen from this diagram, the bulk of the public area is National Forest with the state of Idaho ranking next in public ownership importance. Public domain, county, and Indian Service lands together represent but a small fraction of the area.

This high proportion of state and federal holdings is perhaps the principal factor favoring the attainment of general sustained yield management in a reasonable length of time.

Sustained Yield Possibilities

The Forest Survey has disregarded political subdivisions, for the most part, in attempting to set up the most feasible economic units for sustained yield management, the boundaries of these units being determined by physical geography as it affects the destination of the logs from stump to mill. The forests of Boundary County lie in three principal drainages, the Pack River, Priest River, and Kootenai River. The timber in the first two will probably move southward out of the county for manufacture, and be handled in conjunction with that in the lower portions of the same drainages in Bonner County, thereby making any consideration on a

county basis inadequate. Detailed analyses, far more intensive than this preliminary presentation, will be made for the economic unit or units of which Boundary County is a part. Consideration of the county situation is none-the-less important, having very direct bearing upon the future of this area.

The calculations for sustained yield management in north Idaho must be based, to a large extent, upon an economic "if". As has been already mentioned, the present low values for the minor species, in general, limit profitable logging to the white pine and ponderosa pine types. If only these two types can be considered in future plans, the allowable annual cut must be based on an area of approximately 291,800 acres (zone one and two, white pine and ponderosa pine areas) rather than on the 547,717 acres representing the entire acreage of zone one and two timberland. With values as they are, it is estimated that the acreage in the two major timber types could sustain a yearly cut of 12 or 13 million board feet, log scale. Whereas, if the minor species increased sufficiently in value, an annual cut of 40 or 45 million board feet might be permanently maintained from the entire zone one and zone two area. These figures clearly emphasize the part that the future trends in stumpage values will play in the welfare of this and other Inland Empire counties.

The forest picture in Boundary County, as far as the distribution of age classes is concerned, is a rather encouraging one. As is graphically shown in figure 4, the timber stand arrangement is favorable for sustained production, exceeding

for the most part the minimum requirements depicted by the wedge-shaped area below the sloping dotted line. Since forest land under commercial management produces periodic rather than annual crops, permenently maintained production requires a continuous succession of areas available for cutting. This diagram divides the commercial timberland into 120 equal parts (120 year rotation), and assumes that the oldest stands will be cut the first years and the other stands in successive years according to seniority. By this arrangement the younger stands will have reached the rotation age by the time of cutting. This, of course, disregards fire and other depletion factors which will reduce the allowable area cut.

When the total area has been completely covered once, the portion logged the first year will again have reached the cutting age of 120 years etc. While actual management is a complex problem it should in effect function as in this ideal case. The slight deficit in the lower age classes shown in figure 4, presents no serious management problem. This figure is based upon the zone one and two timberland of all types. However, zone one and two white pine and ponderosa pine areas alone show the same desirable distribution of age classes. The decision of how much the minor types will be considered in present management plans, based on a forecast of future stumpage values, is one of important policy with far reaching effects.

In view of all of the problems and obstacles in the path of the adoption of sustained yield production by private concerns, the high proportion of publicly owned timberland is heartening. With the lack of unity in private ownership and the various financial

difficulties which must be overcome, the attainment of general sustained yield production is certain to be considerably slower on private lands than on public lands.

As shown in tables 6 and 7, the quality of timberland and the stocking of the young stands are more than satisfactory. With public and private agencies continually tightening their grip on the fire problem, foresters have come to regard the blister rust disease of white pine as the principal threat to the north Idaho lumber industry. As yet, the injury from this disease has not been great in this county. Its importance lies largely in its potentialities which can be judged from its damaging effect in other parts of north Idaho where the injury has already been serious. It constitutes to all young white pine stands, a grave menace, the extent of which is determined by the efficacy of present Federal control measures.

The prospect of yet making managed production a reality for the economic unit including Boundary County is directly tied to the young stands. During the period in which effort is being coordinated to obtain sustained yield management in this unit, simple foresight dictates a protection program sufficient to maintain these growing stands in their fullest productivity.

The benefits that Boundary County can derive from sustained yield production are readily apparent. Whether the annual cut from the forests of this county is 12 million feet or 40 million feet, it is most important that the production level be one that can be maintained permenently; for the net value of an industry "here today and gone tomorrow" must be discounted, from the community

standpoint at least, to almost nothing. With sustained yield production, Boundary County can share with its woods and mill workers the benefits of stabilized and continuous employment and with the Region and Nation the facilities offered by a plentiful timber supply.

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To facilitate the most intelligent use of the tables in this publication, the methods followed and the types, terms, and classifications used in collecting and presenting these data are described in a supplementary report.[5/] Brief definitions of the more important of these are contained in the glossary.

INVENTORY PHASE -- BOUNDARY COUNTY, IDAHO

G.M. DeJarnette, in Charge — T.E. Rowland, Ass't

Type Mapping	Check Cruising	Compilation
W.F. Guntermann	P.N. Pratt	O.B. Johnson
J.N. Hessel	R.J. Smith	W.L. Royer
R.G. Gallup	L.H. DeGroote	J.M. Honeywell
B.A. Dodge	H.B. Hawk	W.F. Guntermann
R.L. Wrights	G.N. Allman	W.W. Ensign
W.W. Ensign	E.G. Rutquist	F.B. Casler
O.B. Johnson	J.M. Honeywell	R.J. Smith
A.A. Flint		J.J. McHugh
F.R. Waylett		H.J. Pissot
E.R. Marks		M.O. Moore
F.B. Casler		
H.B. Hawk		
I. Puphal		
J. Frykman		

Report Writing--S.B. Hutchison

.....

The figures in this report are preliminary and subject to correction in future releases.

5/ Forest Survey Release No. 3. The Inventory Phase of the Forest Survey for the Northern Rocky Mountain Region--A Definition of the Procedure, Terms, and Classifications.

RE-NF&M
Forest Survey

Table 2 - CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
BOUNDARY COUNTY, IDAHO

Area in Acres

(Table continued on next page)

Timber Type	Zone	Large Private					Small Private					State 1/					County				
		Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total
Western white pine	1	17,665	6,918	6,953	4,000	35,536	1,092	6,844	4,477	549	12,962	17,123	5,108	7,924	591	30,746		1,225	730	874	2,829
	2	2,938	771	391	109	4,209	215	45	117		377	613	141	85		839					
	3	39		100	1,102	1,241				308	308									121	121
	Total	20,642	7,689	7,444	5,211	40,986	1,307	6,889	4,594	857	13,647	17,736	5,249	8,009	591	31,585		1,225	730	995	2,950
Ponderosa pine-pure	1	1,327	430	1,377		3,134	1,286	1,274	641		3,201	45	151	178		374	9	367	31		407
	2																				
	3																				
	Total	1,327	430	1,377		3,134	1,286	1,274	641		3,201	45	151	178		374	9	367	31		407
Ponderosa pine-mixed	1	5,010	5,560	6,317	617	17,504	3,228	10,032	7,599	552	21,411	1,469	213	743	22	2,447	145	88	207		440
	2	40	334			374	10				10		83			83					
	3																				
	Total	5,050	5,894	6,317	617	17,878	3,238	10,032	7,599	552	21,421	1,469	296	743	22	2,530	145	88	207		440
Ponderosa pine-Total	1	6,337	5,990	7,694	617	20,638	4,514	11,306	8,240	552	24,612	1,514	364	921	22	2,821	154	455	238		847
	2	40	334			374	10				10		83			83					
	3																				
	Total	6,377	6,324	7,694	617	21,012	4,524	11,306	8,240	552	24,622	1,514	447	921	22	2,904	154	455	238		847
Larch-Douglas fir	1	3,726	12,514	3,236	669	20,135	4,095	19,281	8,770	244	32,390	1,848	1,710	850	19	4,427	411	562	280	18	1,271
	2	1,099	449	1,038		2,586	12	135	14		161			766		766					
	3	153	27			180															
	Total	4,978	12,990	4,264	669	22,901	4,107	19,416	8,784	244	32,551	1,848	1,710	1,616	19	5,193	411	562	280	18	1,271
Hemlock-white fir	1	149				149		167			167	191				191					
	2	745				745															
	3																				
	Total	894				894		167			167	191				191					
Douglas fir	1	177	327	84		588	73	2,020	156		2,249	304	612	590		1,506	17	22			39
	2	37	144			181						23				23					
	3																				
	Total	214	471	84		769	73	2,020	156		2,249	327	612	590		1,529	17	22			39
Engelmann spruce	1	2,738	186	388		3,312	316	245			561	2,075	638	244		2,957					
	2	5,007	758		965	6,730	110				110	700	205		90	995					
	3	1,542				1,542															
	Total	9,287	944	388	965	11,584	426	245			671	2,775	843	244	90	3,952					
Lodgepole pine	1		52	265		317		1,817	1,666		3,503	24	23	293		340					
	2	353	360	373		1,086			42	90	132	93	1			94					
	3		51			51							2			2					
	Total	353	463	638		1,454		1,817	1,708	90	3,635	117	26	293		436					
Western red cedar 2/	1	1,958				1,958	222			124	346	1,354				1,354	39				39
	2	231				231	16				16										
	3																				
	Total	2,189				2,189	238			124	362	1,354				1,354	39				39
Cedar-white fir 2/	1								235		235			49		49			119		119
	2																				
	3																				
	Total								235		235			49		49			119		119
Cottonwood 3/	1		191			191	1,560	3,752			5,312	262	88			350					
	Total		191			191	1,560	3,752			5,312	262	88			350					
Total Producing Timberland	1	32,750	26,178	18,610	5,286	82,824	11,872	45,432	23,564	1,469	82,337	24,695	8,543	10,871	632	44,741	621	2,264	1,367	892	5,144
	2	10,450	2,816	1,802	1,074	16,142	363	180	173	90	806	1,429	430	851	90	2,800					
	3	1,734	78	100	1,102	3,014				308	308		2			2				121	121
	Total	44,934	29,072	20,512	7,462	101,980	12,235	45,612	23,737	1,867	83,451	26,124	8,975	11,722	722	47,543	621	2,264	1,367	1,013	5,265
Non-restocked Old Burns & Cutovers	1					2,349					2,468					1,106					529
	2					551										107					
	3					952										480					
	Total					3,852					2,468					1,693					529
Total Timberland	1					85,173					84,805					45,847					5,673
	2					16,693					806					2,907					
	3					3,966					308					482					121
	Total					105,832					85,919					49,236					5,794
Woodland Types: Subalpine, Rocky Noncommercial	1					563					916					200					181
	2					271					27					128					
	3					29,764					541					48,051					
	Total					30,618					1,484					48,379					181
GROSS FOREST AREA	1					85,736					85,721					46,047					5,854
	2					16,964					833					3,035					
	3					33,730					849					48,533					121
	Total					136,450					87,403					97,615					5,975

1/ Available for conversion.
2/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
3/ All immature cottonwood stands are grouped in one age class.

Data as of 1935

RE-MFBM
Forest Survey

Table 2 - CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
BOUNDARY COUNTY, IDAHO

(Continued from preceding page)

Area in Acres

Timber Type	Zone	Indian Service				National Forest 1/					Public Domain					Total				
		Sawlog	Pole	Seedling and Sapling	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total
Western white pine	1					34,105	29,915	22,004	12,360	98,384	61	124	483	28	696	70,046	50,134	42,571	18,402	181,153
	2					4,533	4,495	1,542	531	11,101						8,299	5,452	2,135	640	16,526
	3					10	205	25	638	878						49	205	125	2,169	2,548
	Total					38,648	34,615	23,571	13,529	110,363	61	124	483	28	696	78,394	55,791	44,831	21,211	200,227
Ponderosa pine-pure	1	64			64	2,559	888	245		3,692	140		111		251	5,430	3,110	2,583		11,123
	2					114				114						114				114
	3																			
	Total	64			64	2,673	888	245		3,806	140		111		251	5,544	3,110	2,583		11,237
Ponderosa pine-mixed	1	53	88	83	224	15,190	5,255	3,580	444	24,469	678	458	40	30	1,206	25,773	21,694	18,569	1,665	67,701
	2					1,478	386			1,864						1,528	803			2,331
	3																			
	Total	53	88	83	224	16,668	5,641	3,580	444	26,333	678	458	40	30	1,206	27,301	22,497	18,569	1,665	70,032
Ponderosa pine-Total	1	117	88	83	288	17,749	6,143	3,825	444	28,161	818	458	151	30	1,457	31,203	24,804	21,152	1,665	78,824
	2					1,592	386			1,978						1,642	803			2,445
	3																			
	Total	117	88	83	288	19,341	6,529	3,825	444	30,139	818	458	151	30	1,457	32,845	25,607	21,152	1,665	81,269
Larch-Douglas fir	1					13,654	20,508	17,211	112	51,485	989	684	1,097	2	2,772	24,723	55,259	31,434	1,064	112,480
	2					5,552	10,152	9,986	774	26,464		36	337		373	6,663	10,772	12,141	774	30,350
	3					76	397	78		551						229	424	78		731
	Total					19,282	31,057	27,275	886	78,500	989	720	1,434	2	3,145	31,615	66,455	43,653	1,838	143,561
Hemlock-white fir	1					337		76	151	564						677	167	76	151	1,071
	2					620			197	817						1,365			197	1,562
	3																			
	Total					957		76	348	1,381						2,042	167	76	348	2,633
Douglas fir	1		20		20	613	1,861	962		3,436		205			205	1,184	5,067	1,792		8,043
	2					474	592	61		1,127						534	736	61		1,331
	3																			
	Total		20		20	1,087	2,453	1,023		4,563		205			205	1,718	5,803	1,853		9,374
Engelmann spruce	1					10,636	3,575	232	696	15,139						15,765	4,644	864	696	21,969
	2					11,239	4,749	1,335	1,140	18,463						17,056	5,712	1,335	2,195	26,298
	3					1,063				1,063						2,605				2,605
	Total					22,938	8,324	1,567	1,836	34,665						35,426	10,356	2,199	2,891	50,872
Lodgepole pine	1					601	4,017	8,856		13,474						625	5,909	11,100		17,634
	2					504	12,537	7,000	877	20,918		14		13	27	950	12,912	7,415	980	22,257
	3					136	2,191	1,506		3,833						136	2,244	1,506		3,886
	Total					1,241	18,745	17,362	877	38,225		14		13	27	1,711	21,065	20,021	980	43,777
Western red cedar 2/	1					4,745			167	4,912						8,318			291	8,609
	2					665			25	690						912			25	937
	3																			
	Total					5,410			192	5,602						9,230			316	9,546
Cedar-white fir 2/	1					1,126				1,126			5		5	1,126		408		1,534
	2					268				268						268				268
	3																			
	Total					1,394				1,394			5		5	1,394		408		1,802
Cottonwood 3/	1	247	190		437	20	86			106	19	47			66	2,108	4,354			6,462
	Total	247	190		437	20	86			106	19	47			66	2,108	4,354			6,462
Total Producing Timberland	1	364	298	83	745	83,586	66,105	53,166	13,930	216,787	1,867	1,518	1,736	60	5,201	155,775	150,338	109,397	22,269	437,779
	2					25,447	32,911	19,924	3,544	81,826		50	337	13	400	37,689	36,387	23,087	4,811	101,974
	3					1,285	2,793	1,609	638	6,325						3,019	2,873	1,709	2,189	9,770
	Total	364	298	83	745	110,318	101,809	74,699	18,112	304,938	1,867	1,568	2,073	73	5,601	196,483	189,598	134,193	29,249	549,523
Non-restocked Old Burns & Cutovers	1									4,057					215					10,724
	2									3,044										3,702
	3									2,553										3,985
	Total									9,654					215					18,411
Total Timberland	1				745					220,844					5,416					448,503
	2									84,870					400					105,676
	3									8,878										13,755
	Total				745					314,592					5,816					567,934
Woodland Types: Subalpine, Rocky Noncommercial	1									2,071					106					4,057
	2									4,266					85					4,777
	3									98,900										177,256
	Total									105,237					191					186,090
GROSS FOREST AREA	1				745					222,915					5,522					452,560
	2									89,136					485					110,453
	3									107,778										191,011
	Total				745					419,829					6,007					754,024

1/ Available for conversion.
2/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
3/ All immature cottonwood stands are grouped in one age class.

Data as of 1935

RE-NRM
Forest Survey

Table 3 TOTAL VOLUME OF SAWTIMBER BY TYPE OF STAND, SPECIES, AND OWNERSHIP
BOUNDARY COUNTY, IDAHO

Ownership Class	Volume by species - thousand board feet log scale (Scribner Dec. C)											Pieces Cedar Poles
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White ° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern Black cottonwood	Total	
Sawlog Stands°° (all zones)												
Large Private	152,144	24,244	77,847	55,637	69,970	97,795	47,974	142,059	8,293	63	676,026	150,345
Small Private	5,225	24,033	24,311	14,409	3,386	4,083	586	6,837	1,347	11,665	95,882	3,742
State	146,140	7,415	21,524	28,493	38,529	49,851	55,701	70,105	7,281	1,572	426,611	84,503
County	57	548	1,330	1,366	2	373	5		98	19	3,798	339
Indian Service		463	74	131						993	1,661	
National Forest	215,814	98,303	192,927	115,456	76,153	184,590	127,125	243,584	23,911	130	1,277,993	179,996
Public Domain	624	2,595	3,172	4,451	477	215	10	18	106	76	11,744	72
Total	520,004	157,601	321,185	219,943	188,517	336,907	231,401	462,603	41,036	14,518	2,493,715	418,997
Scattered Sawlog Trees in Immature Stands (all zones)												
Large Private	1,036	9,215	13,696	7,088	84	1,623	28	478	137	76	33,461	
Small Private	1,340	14,423	13,775	9,759	539	388	30		586	229	41,069	
State	1,538	877	4,605	1,878	1,054	489	14	334	16		10,805	
County	54	766	684	470		34	1				2,009	
National Forest	4,133	9,787	20,139	6,768	459	1,046		4,870	5,830	85	53,117	
Public Domain	130	569	1,122	557							2,378	
Total	8,231	35,637	54,021	26,520	2,136	3,580	73	5,682	6,569	390	142,839	
Grand Total	528,235	193,238	375,206	246,463	190,653	340,487	231,474	468,285	47,605	14,908	2,636,554	418,997

° Includes some alpine fir.
°° Includes the volume in cedar and cedar-white fir merchantable pole stands.

Data as of 1935

RE-NRM
Forest Survey

Table 4 VOLUME OF SAWTIMBER IN SAWLOG STANDS° BY ZONE, OWNERSHIP AND SPECIES
BOUNDARY COUNTY, IDAHO

Ownership Class	Volume by species - thousand board feet log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White°° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar Poles
Zone 1												
Large Private	134,443	23,736	62,103	46,578	33,802	83,539	37,150	76,356	4,179	63	501,949	121,077
Small Private	4,781	23,993	23,869	14,151	2,320	3,859	350	5,310	1,263	11,665	91,561	2,628
State	142,100	7,415	20,056	27,520	36,113	48,970	54,795	66,834	6,748	1,572	412,123	78,873
County	57	548	1,330	1,366	2	373	5		98	19	3,798	339
Indian Service		463	74	131						993	1,661	
National Forest	187,054	89,747	156,963	93,839	40,907	169,257	118,931	169,492	19,192	130	1,045,512	155,058
Public Domain	624	2,595	3,172	4,451	477	215	10	18	106	76	11,744	72
Total	469,059	148,497	267,567	188,036	113,621	306,213	211,241	318,010	31,586	14,518	2,068,348	358,047
Zone 2												
Large Private	16,924	462	13,099	8,141	30,305	14,119	10,521	55,385	3,271		152,227	29,244
Small Private	444	40	442	258	1,066	224	236	1,527	84		4,321	1,114
State	4,040		1,468	973	2,416	881	906	3,271	533		14,488	5,630
National Forest	28,154	8,556	34,717	20,961	33,963	14,808	7,971	69,305	3,738		222,173	24,932
Total	49,562	9,058	49,726	30,333	67,750	30,032	19,634	129,488	7,626		393,209	60,920
Zone 3												
Large Private	777	46	2,645	918	5,863	137	303	10,318	843		21,850	24
National Forest	606		1,247	656	1,283	525	223	4,787	981		10,308	6
Total	1,383	46	3,892	1,574	7,146	662	526	15,105	1,824		32,158	30
Grand Total	520,004	157,601	321,185	219,943	188,517	336,907	231,401	462,603	41,036	14,518	2,493,715	418,997

° Includes volume in cedar and cedar-white fir merchantable pole stands.
°° Includes some alpine fir.

Data as of 1935

RE-NRM
Forest Survey

Table 5 VOLUME OF SAWTIMBER IN SAWLOG STANDS BY TYPE, ZONE, AND SPECIES
BOUNDARY COUNTY, IDAHO

Timber Type	Volume by species - thousand board feet log scale (Scribner Dec. C)											Pieces cedar poles
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	
Zone 1												
Western white pine	429,836	7,004	124,972	93,159	79,660	119,173	130,327	144,914	10,901		1,139,946	288,647
Ponderosa pine-pure	33	32,804	2,132	3,378		268		1	47		38,663	
Ponderosa pine-mixed	2,465	96,362	29,981	34,867	2,293	803	987	66	3,435	31	171,290	8,217
Larch-Douglas fir	5,833	11,943	91,215	43,279	2,944	2,355	1,391	2,734	1,200	1,025	163,919	4,081
Hemlock-white fir	167		252	434	1,263	2,868	3,239	735	558		9,516	2,737
Douglas fir	203	335	1,268	4,631	108	80		325			6,950	556
Engelmann spruce	10,196	7	6,790	1,844	19,452	9,498	3,440	146,277	10,065		207,569	2,064
Lodgepole pine	34		68	91	1,428		22	2,653	5,320		9,616	
Western red cedar°°	19,495		8,588	5,052	4,876	163,936	70,402	17,985			290,334	37,777
Cedar-white fir°°	797		2,022	1,143	1,597	7,207	1,433	2,320	60		16,579	13,968
Cottonwood		42	279	158		25				13,462	13,966	
Total	469,059	148,497	267,567	188,036	113,621	306,213	211,241	318,010	31,586	14,518	2,068,348	358,047
Zone 2												
Western white pine	34,586	530	11,625	8,530	8,444	12,817	11,899	19,301	943		108,675	38,963
Ponderosa pine-pure		974	162	57							1,193	
Ponderosa pine-mixed	108	5,193	3,076	3,708	32	37	1	56			12,211	147
Larch-Douglas fir	3,247	1,922	21,096	13,580	3,799	760	1,339	1,442	1,310		48,495	3,047
Hemlock-white fir	504		15	172	5,957	134	1,134	4,331	55		12,302	2,665
Douglas fir	4	439	4	2,128							2,575	
Engelmann spruce	8,239		11,611	1,744	43,502	11,945	2,883	98,148	3,164		181,236	8,144
Lodgepole pine	413		823	331	280	38	65	999	2,154		5,103	901
Western red cedar°°	2,107		912		5,305	829	2,313	1,930			13,396	7,053
Cedar-white fir°°	354		402	83	431	3,472		3,281			8,023	
Total	49,562	9,058	49,726	30,333	67,750	30,032	19,634	129,488	7,626		393,209	60,920
Zone 3												
Western white pine	697		1,540	141	497	110	267	132	125		3,509	30
Larch-Douglas fir	68	46	851	1,273	370	31	45		141		2,825	
Engelmann spruce	618		1,501	160	6,245	521	214	14,837	1,161		25,257	
Lodgepole pine					34			136	397		567	
Total	1,383	46	3,892	1,574	7,146	662	526	15,105	1,824		32,158	30
Grand Total	520,004	157,601	321,185	219,943	188,517	336,907	231,401	462,603	41,036	14,518	2,493,715	418,997

° Includes some alpine fir.
°° Includes volume in merchantable pole stands.

Data as of 1935

Table 6 CLASSIFICATION OF IMMATURE TIMBER TYPES ACCORDING TO DENSITY OF STOCKING
BOUNDARY COUNTY, IDAHO

Timber 1/ Type	Pole							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	51,976	93	2,772	5	1,043	2	55,791	100
Ponderosa pine-pure	940	30	1,551	50	619	20	3,110	100
Ponderosa pine-mixed	8,679	38	9,391	42	4,427	20	22,497	100
Larch-Douglas fir	48,242	73	14,701	22	3,512	5	66,455	100
Hemlock-white fir	167	100					167	100
Douglas fir	3,174	55	1,808	31	821	14	5,803	100
Engelmann spruce	9,916	96	440	4			10,356	100
Lodgepole pine	20,233	96	776	4	56		21,065	100
Cedar-white fir								
Total	143,327	77	31,439	17	10,478	6	185,244	100

Timber 1/ Type	Seedling and Sapling							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	31,981	71	9,558	21	3,292	8	44,831	100
Ponderosa pine-pure	502	19	895	35	1,186	46	2,583	100
Ponderosa pine-mixed	5,760	31	8,564	46	4,245	23	18,569	100
Larch-Douglas fir	33,864	78	7,850	18	1,939	4	43,653	100
Hemlock-white fir	76	100					76	100
Douglas fir	406	22	682	37	765	41	1,853	100
Engelmann spruce	2,199	100					2,199	100
Lodgepole pine	16,523	82	3,320	17	178	1	20,021	100
Cedar-white fir	408	100					408	100
Total	91,719	68	30,869	23	11,605	9	134,193	100

Timber 1/ Type	Total Immature							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	83,957	84	12,330	12	4,335	4	100,622	100
Ponderosa pine-pure	1,442	25	2,446	43	1,805	32	5,693	100
Ponderosa pine-mixed	14,439	35	17,955	44	8,672	21	41,066	100
Larch-Douglas fir	82,106	75	22,551	20	5,451	5	110,108	100
Hemlock-white fir	243	100					243	100
Douglas fir	3,580	47	2,490	33	1,586	20	7,656	100
Engelmann spruce	12,115	96	440	4			12,555	100
Lodgepole pine	36,756	89	4,096	10	234	1	41,086	100
Cedar-white fir	408	100					408	100
Total	235,046	74	62,308	19	22,083	7	319,437	100

1/ The cottonwood type is not classified as to stocking. Data as of 1935

Table 7 CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND SITE QUALITY
BOUNDARY COUNTY, IDAHO

Area in Acres

Timber° Type	Site number					Total area	Average site
	I	II	III	IV	V		
Western white pine	9,796	78,464	75,507	15,249		179,016	II and III
Ponderosa pine-pure		463	4,188	5,622	964	11,237	III and IV
Ponderosa pine-mixed		3,531	35,855	27,379	1,602	68,367	III and IV
Larch-Douglas fir		13,672	100,121	26,812	1,118	141,723	III
Hemlock-white fir		374	1,444	467		2,285	III
Douglas fir			1,731	5,757	1,886	9,374	IV
Engelmann spruce		7,204	36,754	4,023		47,981	III
Lodgepole pine		13,111	26,867	2,819		42,797	III
Western red cedar	324	2,128	6,765	13		9,230	III
Cedar-white fir	164	1,142	496			1,802	II
Total	10,284	120,089	289,728	88,141	5,570	513,812	

° The cottonwood type is not classified as to site.

Data as of 1935

RE-NRM
Forest Survey

Table 8 CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND AGE CLASS
ZONES ONE AND TWO
BOUNDARY COUNTY, IDAHO

Area in Acres

Timber Type°	Age class - years						Total
	0-40	41-80	81-120	121-160	161-200	200+	
Western white pine	56,468	42,351	1,945	14,376	29,326	34,171	178,637
Ponderosa pine-pure	3,357	2,528	721	798	1,731	2,102	11,237
Ponderosa pine-mixed	23,739	16,182	5,072	178	13,088	10,108	68,367
Larch-Douglas fir	49,955	41,188	13,437	7,937	15,493	12,982	140,992
Hemlock-white fir	76	167		38	350	1,654	2,285
Douglas fir	1,912	3,415	1,965	302	1,027	753	9,374
Engelmann spruce	2,199	8,672	5,191	4,358	9,719	15,237	45,376
Lodgepole pine	17,221	18,576	1,578	165	1,269	102	38,911
Western red cedar			367	739		8,124	9,230
Cedar-white fir	408		164		120	1,110	1,802
Total	155,335	133,079	30,440	28,891	72,123	86,343	506,211

°The cottonwood type is not classified as to age.

Data as of 1935

RE-NRM
Forest Survey

Table 9 - AVERAGE ANNUAL CUTTING DEPLETION FROM THE GREEN TIMBER RESOURCES BY TREE SIZE, SPECIES AND PRODUCTS
BOUNDARY COUNTY, IDAHO

Product	White pine	Ponderosa pine	Larch	Douglas fir	White fir	Cedar	Hemlock	Engelmann spruce	Lodgepole pine	Cotton-wood	Total
From trees of sawtimber size (thousand board feet, Scribner Dec. C, log scale)											
Sawlogs 1/	5,984	7,393	2,812	2,053	1,489	241	158	286	1	1	20,418
Fuelwood 2/			1,988	1,524						747	4,259
Fence Posts 2/						419					419
Pulpwood 3/					1,592		94	835			2,521
Hewed Ties 4/			93	50							143
Mine Timbers 5/		4	1					2			7
Piling 4/			20	14							34
Total	5,984	7,397	4,914	3,641	3,081	660	252	1,123	1	748	27,801
From trees of less than sawtimber size (cubic feet)											
Product	White pine	Ponderosa pine	Larch	Douglas fir	White fir	Cedar	Birch	Engelmann spruce	Lodgepole pine	Cotton-wood	Total
Fuelwood 2/			85,484	65,532			24,080			14,276	189,372
Fence Posts 2/			10,120			10,055					20,175
Hewed Ties 4/			2,705	1,463							4,168
Poles 4/						1,548,763					1,548,763
Piling 4/						106,427					106,427
Total			98,309	66,995		1,665,245	24,080			14,276	1,868,905

1/ 1925-1936 inclusive.
2/ From a special survey in 1935.
3/ 1927-1934 inclusive.
4/ 1927-1929-1931-1933.
5/ 1928-1932 inclusive.

Glossary

NON-FOREST LAND TYPES

Townsites - includes both incorporated and unincorporated urban settlements.

Cultivated - areas cleared and/or cultivated for agricultural use, including pasture.

Stump pasture - logged off or burned off lands, part of operating farm units, now chiefly devoted to grazing and from which stumps or snags have not been removed.

Barrens - areas too rocky, too scanty as to soil, or too exposed, to support a vegetative cover of either trees, shrubs, or herbs.

Grass - areas such as parks, mountain meadows, or treeless ridges, whose principal vegetation is grass and herbs.

Brush - areas whose principal vegetation is sagebrush, brush, or shrubs as a permanent type.

FOREST LAND TYPES

Timberland - forest areas capable of producing trees of commercial species and quality.

Producing timberland - timberland areas containing forest growth, or if not, which have been denuded since 1925.

Deforested timberland - non-restocked old burns or cut-overs denuded prior to 1925.

Woodland - that portion of the forest land neither immediately or potentially productive of commercial timber. Included in this classification are:

Subalpine - stands above the altitude range of merchantability.
Rocky non-commercial - areas too steep, sterile, or rocky to produce merchantable timber.
Juniper - stands 80 percent or more Rocky Mountain red cedar.

Sawlog stands - timber stands containing 3 thousand board feet per acre for the ponderosa pine and lodgepole pine types or 4 thousand board feet for the other types, except cottonwood, in trees of sawlog size. The cottonwood type has no minimum limit. The minimum sizes for sawlog trees are: white pine, ponderosa pine, lodgepole pine - 12 inches, cedar - 24 inches, and other species - 14 inches (diameter breast high).

Merchantable pole stands - cedar or cedar-white fir stands containing 8 or more commercial cedar poles to the acre (12 to 24 inches diameter breast-high).

Other pole stands - timber stands in which the majority of the dominant trees are between 6 inches and merchantable size.

Seedling or sapling stands - timber stands in which the majority of the dominant trees are less than 6 inches.

Immature stands - includes pole, seedling, and sapling stands. Does not indicate the degree of maturity from a silvicultural standpoint.

Recent burns and cut-overs - areas cut or burned since 1925 for which sufficient time has not elapsed to allow classification into one of the other timber types.

Reserved areas - includes publicly owned forest lands not available for conversion into timber products but reserved for parks, primitive areas, protection of municipal watersheds, etc.

Zones - Zone One includes areas loggable under present conditions.
Zone Two includes areas loggable with increased stumpage values.
Zone Three includes areas of no probable value for timber production.

Site class - the index of the productivity of an area for growing forests. There are 5 or 6 site classes with the best sites numbered one, the next best two, etc.

Stocking - in young timber stands stocking is the measure of the extent to which an area is covered with forest growth. The degrees of stocking are:

Less than 10 percent stocked	= unstocked
10 to 39 percent stocked	= poorly stocked
40 to 69 percent stocked	= medium stocked
70 to 100 percent stocked	= well stocked